

Appl. No. 10/607,953

Reply to Final Office Action of December 21, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A motor, comprising:
a common stator having a cavity formed therethrough;
a first rotor at least partially disposed within said cavity, said first rotor differentially driven by said common stator; and
a second rotor at least partially disposed within said cavity and capable of independent rotation with respect to said first rotor, said second rotor differentially driven by said common stator; and
~~a common stator for differentially driving said first and second rotors.~~
2. (original) A motor according to claim 1 wherein said common stator includes a single winding for activating said first and second rotors.
3. (original) A motor according to claim 1 wherein said common stator comprises first and second windings for driving said first and second rotors respectively.
4. (currently amended) An electric drive system, comprising:
first means for producing electrical energy;
a first and a second drive wheels; and
a motor, comprising:
a common stator having a cavity formed therethrough; coupled to a said generating means for driving said first and second rotors
a first rotor for driving said first drive wheel, said first rotor disposed at least partially within said cavity;

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a second rotor for driving said second drive wheel, said second rotor disposed at least partially within said cavity, said first and second rotors capable of independent relative rotation; and

~~a common stator coupled to a said~~ generating means for driving said first and second rotors coupled to said common stator.

5. (original) An electric drive system according to claim 4 wherein said common stator includes a single winding for energizing said first and second rotors.

6. (original) An electric drive system according to claim 4 wherein said common stator comprises first and second windings for driving said first and second rotors respectively.

7. (original) An electric drive system according to claim 4 wherein said first means is an inverter.

8. (original) An electric drive system according to claim 4 further comprising a processor coupled to said inverter for altering the torque applied to one said first and second rotors relative to the other of said first and second rotors.

9. (original) An electric drive system according to claim 8 further comprising second means for sensing the torque applied to each of said first and second drive wheels.

10. (original) An electric drive system according to claim 8 further comprising second means for sensing the speed of each of said first and second drive wheels.

11. (original) An electric drive system according to claim 9 wherein said second means comprises a closed loop torque controller.

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12. (original) An electric drive system according to claim 10 wherein said second means comprises a closed loop speed controller.

13. (currently amended) An electric drive system, comprising:
at least first and second drive wheels;
a motor comprising:

a common stator having a cavity formed therethrough;

a first rotor for driving said first drive wheels, said first rotor disposed at least partially in said cavity of said common stator;

a second rotor for driving said second drive wheels, said second rotor disposed at least partially in said cavity of said common stator, said first and second rotors capable of independent relative rotation; and

~~a common stator coupled to said generating means and to said common stator for driving said first and second rotors~~ coupled to said common stator;

a processor coupled to said motor; and

at least one sensor mechanism coupled to said processor for providing at least a first operational parameter to said processor for altering the operation of said motor to improve traction of at least one of said first and second drive wheels.

14. (original) An electric drive system according to claim 13 wherein said first operational parameter is torque.

15. (original) An electric drive system according to claim 13 wherein said first operational parameter is speed.

16. (original) An electric drive system according to claim 13 wherein said common stator includes a single winding for energizing said first and second rotors.

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17. (original) An electric drive system according to claim 13 wherein said common stator comprises first and second windings for driving said first and second rotors respectively.

18. (original) An electric drive system according to claim 14 wherein said at least one sensor mechanism comprises a closed loop torque controller.

19. (original) An electric drive system according to claim 15 wherein said at least one sensor mechanism comprises a closed loop speed controller.

20. (previously presented) A motor, comprising:
a common stator having an inner surface defining a cavity;
a first rotor shaft at least partially disposed within the cavity;
a first rotor rotationally coupled to the first rotor shaft;
a second rotor shaft at least partially disposed within the cavity;
a second rotor rotationally coupled to the second rotor shaft and configured to rotate independently with respect to the first rotor.

21. (previously presented) An electric drive system, comprising:
a motor comprising;
a common stator having an inner surface defining a cavity;
a first rotor shaft at least partially disposed within the cavity;
a first rotor rotationally coupled to the first rotor shaft;
a second rotor shaft at least partially disposed within the cavity;
a second rotor rotationally coupled to the second rotor shaft and configured to rotate independently with respect to the first rotor; and
first and second drive wheels coupled to the first and second drive shafts, respectively; and
an electric power source coupled to the common stator to thereby drive the first and second rotors.